

深圳市华云鑫年科技有限公司

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产 品 规 格 书

PRODUCT SPECIFICATION

客户承认栏（盖章）/Customer Approved(Signatures)

产品名称/Description: 永磁直流微电机 (Micro DC Motor)

型 号/Part No.: RC716-37A-14

客户名称 /Customer Project:

拟 制 DRAWN	郑 怡	校 对 CHECK	余 辉	批 准 APPROVE	叶新春
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1. OPERATING SCOPE/适用范围

THIS SPECIFICATIONS APPLY TO MODEL RC716-37A-14 Cylindrical DC motor.

该产品说明书适用型号 RC716-37A-14 直流马达

2. OPERATING CONDITIONS/使用条件

NO	ITEMS/项目	SPECIFICATIONS/规定
2-1	RATED VOLTAGE/额定电压	3. 70V DC
2-2	OPERATING VOLTAGE/使用电压范围	0.8~4.2V DC
2-3	ROTATION/旋转方向	C.W /顺时针旋转
2-4	MOTOR POSITION/电机位置	ALL DIRECTION/全方向
2-5	OPERATING CONDITIONS/使用环境	-20°C~60°C, ORDINARY HUMIDITY/ 10~90%RH
2-6	STORAGE CONDITIONS/贮存环境	-40°C~80°C, ORDINARY HUMIDITY/ 5~95%RH (NO CONDENSATION OF MOISTURE/不凝露)

3. MEASURING CONDITIONS/测试条件

NO	ITEMS/项目	SPECIFICATIONS/规定
3-1	TEMPERATURE/温度	20±2°C
3-2	HUMIDITY/湿度	(65±5) RH
3-3	MOTOR POSITION/电机状态	MOTOR SHAFT HORIZONTAL (LOCK THE MOTOR IN A TEST FIXTURE)/输出轴水平 (电机固定在测试夹具中)

ALL DATA ARE BASED ON THE MEASURING CONDITIONS: TEMPERATURE, 20°C; HUMIDITY, 65%RH. IF ANY DISAGREEMENT OCCURS, SUCH TEST CONDITIONS ARE AVAILABLE: TEMPERATURE, 5~35°C; HUMIDITY, 45~85%RH. /

所有数据的测试条件为: 温度 20°C, 相对湿度 65%RH。如果有任何不一致出现, 在以下条件中测试也是可以的: 温度 5~35°C; 湿度 45~85%RH。

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4. APPEARANCE SPECIFICATION/外观性能要求

NO	ITEMS/项目	SPECIFICATIONS/规定	CONDITION REMARK/条件、备注
4-1	CONFIGURATION/ 结构尺寸	ACCORDING TO SPECIFICATION OF MOTOR HOUSING CONFIGURATION/按电机外形结构图规定	DEPENDEN ON FIGURE 1/按照图 1
4-2	APPEARANCE/ 外观	THERE SHALL BE NO EVIDENCE OF MECHANICAL DAMAGE AND SHALL BE NO INADEQUATE CORROSION, ETC. /没有机械的损害痕迹, 并且也没有腐蚀痕迹等。	VISUAL EXAMINATION: (ALLOWABLE EXTENT IN BASED ON BOUNDARY SAMPLE). 目视检查(允许范围和限度见样品)
4-3	WEIGHT/重量	约 g About g	电子称 Electronci Scale
4-4	轴向间隙 Shaft End Play	0.1-0.3mm	千分表 Micrometer

5. MECHANICAL PERFORMANCE AND CHARACTERISTICS/机械性能和特性 (AT ITEM 3 MEASURING CONDITION/按第 3 项的测试条件测试)

NO	ITEMS/项目	SPECIFICATIONS/规定	CONDITION REMARK/条件、备注
5-1	NO-load SPEED/空载转速	57000±10%RPM	额定电压 Rated Voltage
5-2	NO-load CURRENT/空载电流	0.25A (MAX)	
5-3	Load SPEED/负载转速	31000±10%RPM	额定电压 Rated Voltage 封样小风叶
5-4	Load CURRENT/负载电流	2.0A (MAX)	
5-5	STALL CURRENT/ 堵转电流	4.0 A (MAX)	额定电压 Rated Voltage
5-6	STARTING VOLTAGE/ 起动电压	0.8V DC (MAX)	额定负载、轴水平 Rated Load、Shaft Level
5-7	INSULATION RESISTANCE/绝缘强度	10MΩ (MIN)	AT DC 100V BETWEEN THE LEAD WIRES OR REED AND MOTOR HOUSING. /在导线和马达机身之间加 100V 的直流电压。
5-8	ARMATURE RESISTANCE/ 电枢电阻	0.58±10%Ω	AT 20°C

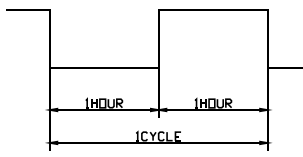
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6. RELIABILITY TEST/可靠性测试

NO	ITEMS/项目	STANDARD TEST CONDITIONS/标准试验条件	REQUIREMENTS/判定特性
6-1	TEMPERATURE SHOCK/ /温度冲击	$85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$  TEST DURATION/试验持续时间: 24CYCLES TRANSITION TIME/转换时间: 20S	AFTER 24 HOURS PLACED IN ORDINARY TEMPERATURE AND HUMIDITY , MOTORS SHALL BE SATISFY WITH SPECIFIED IN ITEM 7-1./ 常温常湿中放置 24 小时后, 测试应满足 7-1 项要求
6-2	LIFE TEST/寿命试验	VOLTAGE /电压: 3.7 V DC LOAD /负荷: COUNTERWEIGHT (固定风叶) TEMPERATURE/ 温度 : $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ HUMIDITY/湿度: $65 \pm 5\% \text{RH}$ LOCK THE MOTOR IN A TEST FIXTURE (SHAFT HORIZONTAL) /电机固定在试验夹具中 (输出轴水平) TEST MODEL/ 试验形式: 8分 ON (C.W)、8分 (OFF) TEST TIME /试验时间: 30 个循环	AFTER THE TEST, MOTORS SHALL BE SATISFY WITH SPECIFIED IN TIEM 7-1./试验后, 应满足 7-1 项要求.
6-3	HIGH TEMP STORAGE/高温存放试验	TEMPERATURE/温度: $80^{\circ}\text{C} \pm 2^{\circ}\text{C}$ TIME/时间: 48HOURS	AFTER 2 HOURS PLACED IN ORDINARY TEMPERATURE AND HUMIDITY, MOTORS SHALL BE SATISFY WITH SPECIFIED IN ITEM 7-1./常温常湿中放置 2 小时后 测试应满足 7-1 项要求。
6-4	LOW TEMP STORAGE/低温存放试验	TEMPERATURE/温度: $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ TIME/时间: 48 HOURS	
6-5	HIGH TEMP OPERATING TEST/高温运转试验	TEMPERATURE/温度: $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ TIME/时间: 24 HOURS	
6-6	LOW TEMP OPERATING TEST/低温运转试验	TEMPERATURE/温度: $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ TIME/时间: 24 HOURS	
6-7	HIGH TEMP HUMIDITY STORAGE/高温湿度存放试验	TEMPERATURE/温度: $65^{\circ}\text{C} \pm 2^{\circ}\text{C}$ HUMIDITY/湿度: 90 %RH TIME/时间: 88 HOURS NO CONDENSATION OF MOISTURE/不凝露	
6-8	HIGH TEMP HUMIDITY OPERATING TEST/ 高温湿度运转试验	TEMPERATURE/温度: $60^{\circ}\text{C} \pm 2^{\circ}\text{C}$ HUMIDITY/湿度: 95 %RH TIME/时间: 24 HOURS NO CONDENSATION OF MOISTURE/不凝露	

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6-9	VIBRATION TEST /振动试验	TOTAL PEAK AMPLITUDE /全振幅: 1.5mm (P-P) FREQUENCY/频率: 60HZ PERIOD/周期: 10-55-10HZ DIRECTION/方向: X, Y, Z TEST TIME/试验时间: 30 MINUTES PER PLANE/每阶段 30 分钟	
6-10	DROP TEST/ 跌落试验	SET THE MOTOR ON THE HEAVY BLOCK ABOUT 100g WEIGHT (INCLUDE THE MOTOR) AND DROP THE MOTOR ON THE CONCRETE FLOOR. /电机放在大约 100g (包括电机) 重的物体上自由落下到水泥地板上。 HEIGHT/高度: 1.0m DIRECTION/方向: ±X, ±Y, ±Z TIMES/次数: TWO DROPS PER PLANE FOR A TOTAL OF 6 DROPS/每一平面下落 1 次, 共计 6 次	AFTER THE TEST, MOTORS SHALL BE SATISFY WITH SPECIFIED IN TIEM 7-1. /试验后, 应满足 7-1 项要求.

7. REQUIREMENTS/判断特性

NO	ITEMS/项目	REQUIREMENTS/判定特性
7-1	TABLE A	1) LOAD SPEED VARIES WITHIN ±30% FROM INITIAL. /负载转速的变化应在初始值的±30%内; 2) LOAD CURRENT VARIES WITHIN ±30% FROM INITIAL. /负载电流的变化应在初始值的±30%内; 3) TERMINAL RESISTANCE VARIES WITHIN±30% FROM INITIAL. /端子间的电阻变化应在初始值的±30%内; 4) STARTING VOLTAGE IS 1 V MAX. /起动电压的最大值为 1 V.

8. PACKAGE REQUIRE/包装要求 (建议包装方式, 厂家可根据本公司自己的包装方式进行)

8.1 CONTENT AND PROCESS/工作内容和程序

8.2 100 PCS VIBRATORS IN EACH PLASTIC TRAY 每个泡沫盒里放 100 台马达。

8.3 EVERY 10 TRAY AS A GROUP PUT A PLASTIC COVER ON THE GROUP AND WRAP IT IN TAPE. /每 10 个泡沫盒上盖一个泡沫盖板, 用胶带捆做一捆。

8.4 EVERY 8 BAGS ARE PUT INTO AN OUTER CASE WITH A SIZE OF 340×230×560 BY THE WAYS STIPULATED AS THE DRAWING. /每 4 盒内包装箱按图中的叠放方式放入一个外包装箱 (340×230×560)。

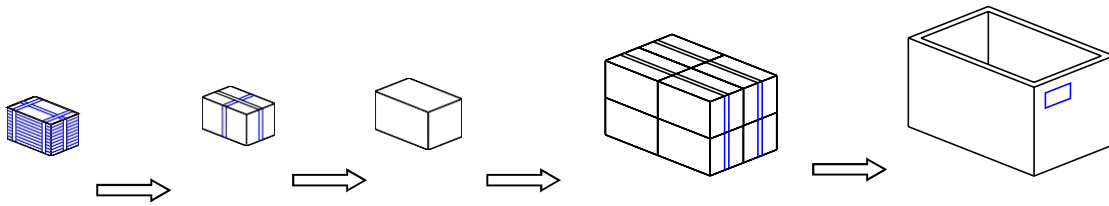
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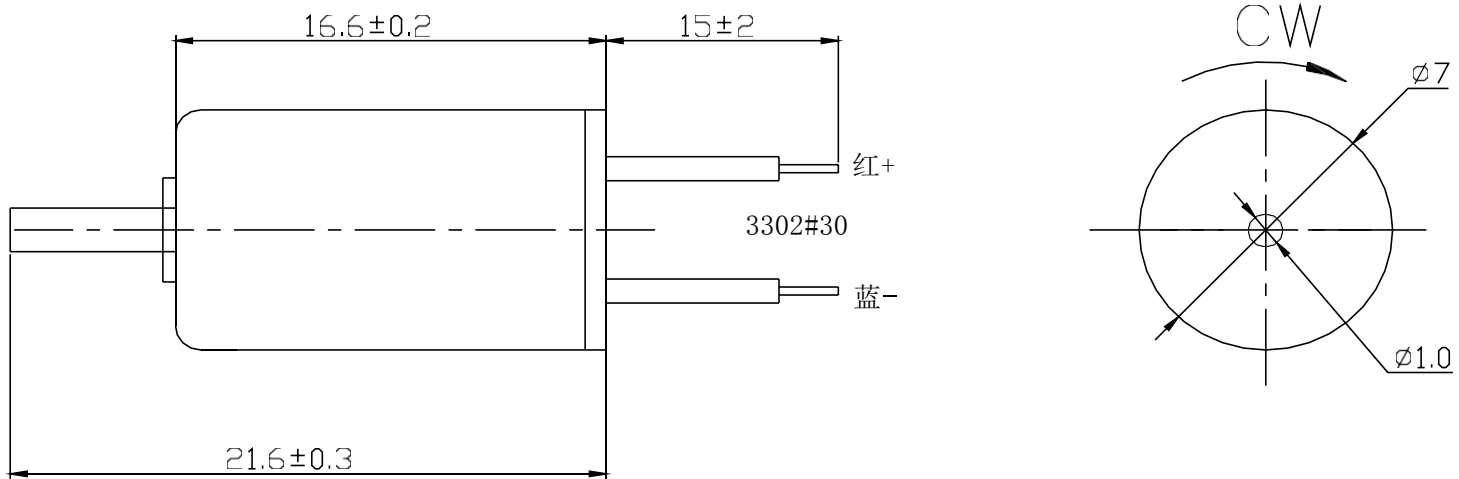
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8.5 QUANTITY AND BATCH NUMBER ARE WRITTEN ON THE SURFACE OF THE OUTER CASE. /数量、生产批号均写在外包装箱上。



9. MECHANICAL DRAWING/机械图



图示电机轴向尺寸未包括电机轴向窜量 0.05-0.3mm.

Figure 1 Motor Housing Configuration

图1 电机外形结构图